

**Amendments to the Specification:**

On page 5, please amend the paragraph lines 24-30 as follows:

The RF pulses of this modified gradient echo MRI sequence are applied at a single frequency (for a single slice); the phase measured at the echo (without encoding gradients) reflects only the phase difference accumulated between the RF pulse and the TE in case that the NMR resonant frequency (due to B0) is not equal to the excitation frequency (excluding susceptibility and chemical shift effects). When the magnet B0 is such that the NMR resonant frequency is the same as the excitation frequency of the RF pulse then the phase error accumulated between RF pulse and TE will be zero or constant from [[TR]] repetition to [[TR]] repetition.

On page 6, please amend the paragraph lines 3-9 as follows:

So, each RF pulse behaves like a phase reset (as far as the f0 measurement process is concerned). The relative phase error (relative to zero at the RF pulse peak) at the TE increases as B0 moves further from the RF excitation frequency. Other mechanisms (chemical shift, susceptibility) can contribute to the phase error measured at the TE. Assuming that these other contributors to phase error are constant from [[TR]] repetition to [[TR]] repetition, the change in B0 can be determined by calculating the difference in phase errors between data acquired [[form]] from two different [[TR's]] repetitions.

On page 6, please delete the list of reference numerals, that is, please delete the list spanning lines 11-28 in its entirety.

After the last line of page 6, please insert the following paragraph:

The invention has been described with reference to the preferred embodiments. Modifications and alterations may occur to others upon reading and understanding the preceding detailed description. It is intended that the invention be

constructed as including all such modifications and alterations insofar as they come within the scope of the appended claims or the equivalents thereof.